AMENDMENTS TO THE SPECIFICATION

Page 4, delete the first full paragraph in its entirety and insert the following new paragraph:

The cold die steel includes, by mass%, 0.7% or more and less than 1.6% of carbon (C), 0.5 to 3.0% of silicon (Si), 0.1 to 3.0% of manganese (Mn), less than 0.05% including 0% of phosphor (P), 0.01 to 0.12% of sulfur (S), 7.0 to 13.0% of chromium (Cr), one or two elements selected from the group consisting of molybdenum (Mo) and tungsten (W) amounts of which satisfy the formula: (Mo + (W/2)) = 0.5 to 1.7%, less than 0.7% including 0% of vanadium (V), 0.3 to 1.5% of nickel (Ni), 0.1 to 1.0% of ~~cupper~~ copper(Cu), and 0.1 to 0.7% of aluminum (Al).

Page 5, delete the first full paragraph in its entirety and insert the following new paragraph:

A principle of the present invention is to provide a cold die steel excellent in characteristics of suppressing the dimensional change and having high hardness, which is based on a chemical composition in which the primary carbides are reduced and the dimensional change is suppressed in an extent of satisfying the characteristics, and to which adequate amounts of nickel and aluminum are added , and besides an adequate amount of ~~cupper~~ copper is added corresponding to the amounts of nickel and aluminum.

Delete the last full paragraph bridging pages 5/6 in its entirety and insert the following new paragraph:

In the present invention, nickel and aluminum form intermetallic compounds precipitating in a secondary hardening region when the above described tool steel is tempered (aged), which cause a contractional change of dimension, and thereby can cancel the above described dilatation due to the decomposition of the retained austenite. It is important for the

above described setoff effect to precipitate the Ni-Al intermetallic compounds at the secondary hardening temperature of the tool steel, and the amount of ~~cupper~~copper having the effect therefor should be appropriately controlled.

Page 7, delete the first full paragraph in its entirety and insert the following new paragraph:

The precipitation strengthening method with intermetallic compounds has been conventionally often applied to a maraging steel, but has not been used in the field of a tool steel including 0.2 mass% or more of carbon, and particularly in the field of a cold die steel which relates to the present invention. In addition to the characteristics of canceling a dimensional change, the present inventors knew that temper carbides do not actually have such a high secondary hardening effect on the tool steel in itself as has been considered, and consequently noticed to use such an intermetallic compound. Because nickel and aluminum act individually to lower the required properties of the tool steel, an appropriate composition and alloy design for the tool steel are necessary in consideration of the mutual interaction of them with copper~~cupper~~.

Page 8, delete the first full paragraph in its entirety and insert the following new paragraph:

The design of the composition is achieved by addition of elements such as copper~~cupper~~, nickel and aluminum, which decrease the amount of solid-solute carbon. That is a principle of the design for suppressing dilatation in quenching. A preferable conditions of achieving such an amount of solid-solute carbon are, in addition to the basic composition and the appropriate amount of copper~~cupper~~, nickel and aluminum to be added which are specified in the present invention, to control amounts of carbon and chromium to be added in the whole cold die steel so

as to satisfy the formulas: (Cr - 4.2 × C)=5 or less, and (Cr - 6.3 × C)=1.4 or more, preferably (Cr - 6.3 × C)=1.7 or more.

Delete the last full paragraph bridging pages 8/9 in its entirety and insert the following new paragraph:

The figure shows that the cold die steel according to the present invention causes larger secondary hardening than JIS SKD11, but can suppress the dimensional change more effectively than that. A principle of the present invention is to simultaneously satisfy the two points of: (1) decreasing the amount of solid-solute carbon in quenching (see the reference character A in FIG. 1); and (2) offsetting a volume change of a matrix in secondary hardening, due to addition of copper~~eupper~~, nickel and aluminum (see the reference character B in FIG. 1). Regarding the concept for the item (1), it is most important industrially to control the amount of solid-solute carbon to be approximately 0.53% at a general-purpose quenching temperature of about 1,030°C. Regarding the concept for the item (2), as it is concerned that adding of copper~~eupper~~ and nickel might degrade hot and cold workabilities, it is important to keep a balance between the level for preventing the degradation thereof and that for causing the maximum precipitation strengthening.

Delete the last full paragraph bridging pages 12/13 in its entirety and insert the following new paragraph:

Nickel (Ni) is coupled with aluminum to form a Ni-Al intermetallic compound which precipitates as described above, and simultaneously thereby causes secondary hardening and the suppression of the dimensional change. Thus, nickel is an important element in the present invention. In addition, it is an useful element for preventing red brittleness of the cold die steel according to the present invention which contained copper~~eupper~~ as described below. The nickel content of less than 0.3% does not provide a sufficient effect, but on the other hand, an excessive

content exceeding 1.5% increases a solubility limit of carbon in iron and lowers the workability in an annealed state. Thus, an amount of nickel is specified to be in a range of 0.3 to 1.5%, preferably in a range of 0.4 to 1.5%, further preferably in a range of 0.5 to 1.3%.

Delete the last full paragraph bridging pages 13/14 in its entirety and insert the following new paragraph:

As for copper~~upper~~, a metal phase of copper~~upper~~ starts to precipitate from a temperature of about 480°C or higher and forms a nucleus of precipitation for an intermetallic compound, so that it enables the above described Ni-Al intermetallic compound to precipitate just at the vicinity of a secondary hardening temperature of the tool steel, although the compound originally precipitates at a higher temperature. Accordingly, it makes the tool steel according to the present invention develop fully the offset effect of the dimensional change and the secondary hardening effect due to the precipitation of the Ni-Al intermetallic compound. However, as a large amount of copper~~upper~~ causes red brittleness, it is important in the present invention to specify the amount thereof to be in a range of 0.1 to 1.0%, preferably in a range of 0.2 to 0.8%.

Page 19, delete the first full paragraph in its entirety and insert the following new paragraph:

The sample No. 8 has the largest dilatation and shows the largest dimensional change. This is because it contains excessive molybdenum. The samples No. 7 and 9 have compositions adequately adjusted to have an amount of molybdenum equivalent of (Mo + (W/2)) being about 1.0%, but still cause the dilatation around 0.05%. In contrast, the samples of No. 1 to 6

containing the appropriate amounts of nickel, copper~~cupper~~ and aluminum show the dimensional change due to heat treatment controlled to be 0.01% or less. The result shows that a precipitation reaction of Ni-Al intermetallic compounds in a secondary hardening region offsets the dilatation.